ABSTRACT OF THE DISCLOSURE

Bioelectric impedances are measured by use of a plurality of electrodes which are brought into contact with body parts of a living body, muscle volumes and maximum voluntary contractions in body parts such as both hands and feet of the subject are calculated from the measured bioelectric impedances, a mechanomyogram when several degrees of loads are imposed on a muscle is also measured, the mechanomyogram data is frequency analyzed so as to determine average frequency and amplitude data, the amounts of actions (frequency of emission) of muscle fibers are calculated from inflection points thereof, and the type of the muscle (muscle fibers) and muscle fatigue of the subject are determined, so as to easily measure a maximum voluntary contraction which has heretofore been difficult to measure and make evaluations associated with muscles more accurately.